STATE OF MICHIGAN
DEPARTMENT OF ENVIRONMENTAL QUALITY
LANSING

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Docket Management Facility
(USCG-2001-10486)
U.S. Department of Transportation
Room PL-401
400 Seventh Street, SW
Washington, DC 20590-0001

To Whom It May Concern:

SUBJECT: Standards for Living Organisms in Ship's Ballast Water Discharged in U.S. Waters

Thank you for the opportunity to comment on the options for setting ballast water treatment goals and standards. Michigan has an utmost interest in controlling the introduction of invasive aquatic nuisance species in all waters of the United States, including the Great Lakes.

The Michigan Department of Environmental Quality (MDEQ) fully supports ballast water controls for invasive species. To this end, the goals and interim standards identified for comment are important first steps. However, the process for development of these goals and interim standards is too lengthy and urgency is needed to address this extremely important issue.

Any approach focused on the treatment of ballast water must be simple, durable, and efficient. We endorse a standards development and implementation process that stops the introduction of foreign invasive species via ballast water by 2005 and minimizes the spread of existing invasive species.

This letter addresses the specific questions asked in the Advance Notice of Proposed Rulemaking. The questions and our responses are as follows:

Question 1. Should the Coast Guard adopt G1, G2, G3, or some other goal for Ballast Water Treatment?

Response: The MDEQ believes in the ultimate goal of zero discharge of foreign species in ballast water by 2005. To this end, we specifically support adoption of a variation of goal G1 with the recommended wording being as follows:

"No discharge of live organisms inclusive of all life stages and bacteria."

Achieving the zero discharge goal is limited by currently available technology; however, the zero discharge goal may be achievable in the future as the technology evolves. Over the long term, ship designs and ballast water treatment technologies that can achieve the goal of zero discharge of foreign species should be developed, consistent with the need for ship safety, practicality, and environmental compatibility.

Question 2. Should the Coast Guard adopt any of the standards S1 – S4 as an interim ballast water treatment standard?

Response: The MDEQ supports the development and implementation of an interim standard, applicable to all commercial vessels, including those declaring "no ballast on board" (NOBOB) status. The MDEQ supports, in concept, the standard labeled S1. We support adoption of a variation of standard S1 with the recommended wording being as follows:

> "Achieve at least 95 percent removal, kill or inactivation of all the individual organisms in each taxonomic classification."

This interim standard would allow for implementation of existing ballast water management practices, and would drive the development of new ballast water treatment technologies.

The National Invasive Species Act of 1996 (NISA) exempts ships entering the Great Lakes declaring NOBOB from the ballast water exchange requirements in the NISA, even though they typically contain a significant residual quantity of unpumpable ballast water and sediment. Approximately 80 to 90 percent of the vessels entering the Great Lakes are fully loaded with cargo and report NOBOB status. Available data indicate living aquatic organisms in the residual ballast water have the potential to become successfully established when the residual ballast water is mixed with inflowing water and subsequently discharged in the Great Lakes. It is estimated that 40 percent of NOBOB vessels in the Great Lakes take on ballast at one port and subsequently discharge their ballast in a different port within the watershed.

Biological removal criteria should be the basis for any ballast water treatment standard. Assuming that a biologically based standard is chosen, it will be necessary to address an effective way to measure whether the standard is being achieved. Perhaps Adenosine triphosphate reduction should be considered. It may be practical to use a biocide residual as a surrogate for a biological kill measurement, since it is often more easily measured and can be calibrated in the laboratory.

The MDEQ does not endorse the standard labeled S2 or S4. These potential standards are based on specific treatment technologies and do not offer the vessel owners/operators needed flexibility to meet the standard.

Question 3. Please provide information on the effectiveness of current technologies to meet the possible standards.

Response: As required by Michigan legislation, the MDEQ is in the process of determining whether there are one or more ballast water treatment methods that could be used by vessels to prevent future aquatic nuisance species introductions. The MDEQ recently completed a special project that evaluates both copper ion and sodium hypochlorite as ballast water biocides. Currently, the Michigan Environmental Science Board (MESB) is reviewing the findings of the study to evaluate the scientific validity of the conclusions of the study. The MESB is expected to release its report on the study later this summer.

Question 4. General comments on how to structure any cost-benefit or cost-effectiveness analysis that evaluates the four standards.

Response: Nonindigenous aquatic nuisance species have invaded the Great Lakes over many decades and are costing the Great Lakes states billions of dollars to control. It is practically impossible to determine what new organisms will be introduced in the future. Because of this, any cost-benefit calculation should consider the cost of previously introduced species. These costs have been estimated and widely distributed in the applicable literature. These costs include treatment costs for eliminating the damage of introduced organisms and the lost opportunity costs associated with loss of native species. It is also important to note that there are many nonnative organisms that, if introduced, could have a considerably greater cost than those already introduced.

Question 5. What impact would the four standards have on small businesses that own and operate vessels?

Response: No information for Michigan is currently available.

Question 6. What potential environmental impacts would the goals or standards carry?

Response: The current scientific literature notes that invasive species are the single largest threat to the biological integrity of the Great Lakes. Without implementation of interim standards and pursuit of the goal of zero introductions, the environmental impacts will get worse.

Again, thank you for the opportunity to provide our comments. If you have any questions regarding these comments, please contact Mr. Jim Bredin, Office of the Great Lakes, at 517-335-4232.

Sincerely,

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Director
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